THE JPL LIBRARY PRESENTS

JPL Stories

Thursday, February 27, 2003

4 PM to 5 PM

JPL Library, Customer Service Area, west end of Building 111 Room 104

About IRAS

(Infrared Astronomy Satellite)

cryogenic challenges and testing of the IR focal plane

Presented by Dr. D. Petrac,

Worked in the cryogenics area of IRAS, low temperature micro-gravity science experiments on the Shuttle, rockets, and KC-135 plane

The IRAS mission lasted 300 days, from January 25th to November 21st in 1983 and was the first satellite to utilize superfluid helium (below 2.17K) to cool infrared detectors.

Come hear firsthand accounts about the cryogenic challenges and solutions: superfluid helium containment and temperature control; cold semiconductor electronics; maximizing the mass fill of the cryogen, mass gauging of the helium and related lifetime issues; and the impact of sloshing and venting on the attitude control.

Everyone is welcome.